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AUTHOR Morrow, William R.
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ABSTRACT

The primary aim of this research project was to test the hypothesis that successful teacher- and parent-mediated direct modification, by operant techniques, of youngsters' deviant behavior would tend to be followed by significant positive changes in the youngsters' self-concepts. Two studies were done. In the first, focusing on teacher-mediated behavior modification, an instructor taught interested teachers in a single elementary school to carry out behavior modification projects with their pupils, and in addition to provide direct, intensive supplementary instruction in arithmetic skills to pupils in several classrooms. The school selected was located in an "inner-city" area. Only five upper-elementary teachers completed behavior modification projects with one or more pupils in their respective classrooms. Self-concept data and teacher-nomination data on deviant pupils, obtained for all of the pupils in these five classrooms, did provide a basis for evaluating the reliability and validity on the self-concept measures, a secondary aim of this project. In order to obtain data on parent-mediated behavior modification, a program of parent behavior-modification training groups was sponsored in the second study, to assist interested parents in modifying problem behaviors of normal youngsters, aged 10-15, who were not receiving any other special treatment. (Author/JM)

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William R. Morrow, Project Director
Professor of Psychology
University of Wisconsin-Parkside
Kenosha, Wisconsin

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## I. PROBLEM, AIMS, & GENERAL PLAN

The primary aim of this research project was to test the hypothesis that successful teacher- and parent-mediated direct modification, by operant techniques, of youngsters' deviant behavior would tend to be followed by significant positive changes in the youngsters' self-concepts. Secondary aims were to test sub-hypotheses as to factors influencing the amount and type of such self-concept changes, and to obtain data (of which relatively little is available) regarding the reliability and validity of self-concept measures. Sub-hypotheses formulated were that positive self-concept changes accompanying behavior modification would tend to be greater--(a) in aspects of self-concept more closely related to the target behaviors modified; (b) where target behaviors modified are such as to elicit greater positive consequences from a greater number of significant others; (c) where modification procedures include arrangement of positive consequences by a greater number of significant others.

Traditional Freudian and other psychodynamic approaches have assumed an opposite hypothesis, viz., that self-insight and self-concept changes are prerequisites of behavior change. Recent behavior modification research has contradicted that assumption by repeatedly demonstrating successful modification of behavior through direct alteration of situational events closely following and/or preceding target behaviors (see, for example, the reviews and anthologies in Bandura, 1969; Bijou & Baer, 1967; Eysenck, 1960, 1964; Franks, 1969; Honig, 1966; Krasner & Ullmann, 1965; Nouringer & Michael, 1970; Ullmann & Krasner, 1965; Ulrich, Stachnik, & Mabry, 1966, 1970).

Moreover, it has been suggested, reversing the psychodynamic assumption. that direct modification of problem behaviors may foster changes in the individual's self-concept or "insight." Such secondary self-concept changes might conceivably come about via response generalization from motor behavior to related self-descriptive verbal behavior, via self-observation of behavior changes resulting in self-descriptive verbal-behavior changes, or via increased approval by significant others as a result of own prosocial behavior changes with consequently increased self-approval.

Relatively little empirical work has been done to test the hypothesis of behavior change fostering self-concept change, or to investigate what factors influence positive generalization to self-attitudes. Wahler & Pollio (1968), using an operant reversal design, found that when an 8-year-old boy's parents in play therapy sessions reversed their usual contingencies by attending to his socially assertive behaviors while ignoring his overdependent, fearful, socially avoidant behaviors, the boy's assertive behaviors increased and his fearful, avoidant behaviors decreased, while his Semantic Differential ratings, on evaluative and activity dimensions, of the words "alone," "help," "school," and -- marginally -- "me," shifted accordingly. Sopina (1970) found marginally significant changes in self vs. ideal-self discrepancy scores of high school students with learning and behavior problems who participated in a

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behavior modification program, as compared with control groups. Koocher (1971) found that 7- to 15-year-old boys in a summer camp who succeeded in learning to swim showed significant reduction in self-ideal self discrepancy scores as compared with boys who failed this task.

The initial research plan called for investigating these hypotheses using as subjects upper-elementary public-school pupils in regular classrooms, with teachers as the primary mediators of behavior modification procedures. A major reason for this choice was the availability of a Federal Title I-supported program in the Racine Unified School District in which groups of teachers enrolled each semester for a credit course in behavior modification in which they were required to conduct behavior modification projects on selected pupil behaviors. Additionally, this choice met other criteria: a setting ecologically influential for the subjects, with significant control of the subjects' behavior exerted by the teacher, and subjects likely able to read, write, and follow instructions adequately to provide self-concept inventory data needed in the study.

Because of unforeseen changes in the Title I program mentioned above, uncertainty arose as to whether the research project could be carried out on the scale required to generate an adequate number of subjects for testing the hypotheses of interest. Therefore, with advance approval of the USPHS funding unit, the plan was modified so as to include two separate studies investigating the same basic hypotheses in two different types of situations with similar subjects and similar procedures: (a) the Title I study referred to above; and (b) a study involving behavior-modification training groups for interested parents concerned to modify problem behaviors of their youngsters.

## II. METHOD

### A. SUBJECTS

#### 1. Study I: Teacher-Mediated Behavior Modification

As a result of administrative policy changes in the Title I program of the Racine Unified School District instituted for the 1972-73 school year, the behavior modification course for interested teachers at large was no longer offered. Instead, the instructor, Yvonne Tellez, was assigned to teach interested teachers in a single elementary school to carry out behavior modification projects with their pupils, and in addition to provide direct, intensive supplementary instruction in arithmetic skills to pupils in several classrooms. The school selected was located in an "inner-city" area; the pupils were predominantly from lower-income families, about half were nonwhite; average pupil scores on achievement tests for this and other inner-city schools were below local and national norms.

Only 5 upper-elementary teachers participated in the behavior modification seminar at the chosen school and completed behavior modification projects with one or more pupils in their respective classrooms. The number of experimental pupil-subjects thus generated was insufficient for meaningful testing of hypotheses regarding self-concept changes concomitant with behavior modification changes (as compared with control subjects). However, self-concept data and teacher-nomination data on deviant pupils, obtained for all of the pupils in these 5 classrooms, did provide a basis for evaluating the reliability and validity of the self-concept measures. This total classroom sample included a total of 89 pupils for whom scorable pretest and posttest



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self-concept inventory data were obtained. This sample represented two 4th-grade classrooms involving 15 and 25 subjects, respectively; one 5th-grade classroom involving 19 subjects; and two 6th-grade classrooms involving 13 and 17 subjects, respectively.

Information on the number of subjects represented in various deviant vs. non-deviant subgroups, as determined by teacher nominations, is reported later in presenting results on validation of self-concept measures.

2. Study II: Parent-Mediated Behavior Modification

In order to obtain data on self-concept changes that might accompany parent-mediated behavior modification changes of youngsters, a program of parent behavior-modification training groups, with only nominal fees, was sponsored by the present project in collaboration with the University of Wisconsin-Extension Division and with the Kenosha, Wisconsin Family Counseling Center, to assist interested parents in modifying problem behaviors of normal youngsters aged 10-15 who were not receiving any other special treatment. Extension groups were recruited via newspaper publicity and flyer announcements, plus several referrals from social agencies that had been invited by the project to make referrals. Family Counseling Center recruits were referrals of clients from the Center staff. A control group was obtained by randomly assigning some of the parents who volunteered to a waiting list; these were later offered treatment, thus providing additional experimental subjects who also served as their own controls, since measurement data was collected from these subjects at the start of the waiting period, again at the start of treatment, and again at the end of treatment.

Including waiting-list controls later provided treatment, there were 8 Extension training groups of 3 to 5 parental units (mother-father pairs, or mothers only), and one Center training group. Of parents initially assigned (without a waiting period) to treatment groups, 19 parental units meeting criteria completed the training series of 10 meetings (or missed only one or two meetings). Of these, 7 were mothers only; 12 were mother-father pairs, although 2 of the fathers who started did not continue after one or two meetings. Additional participants included 2 mothers and 1 mother-father pair who did not complete the training series, 1 mohter of a retarded child and 1 mother-father pair whose youngster was discovered to be in simultaneous treatment -- all of whom were excluded from data analysis.)

Data were obtained for 16 parental units and their youngsters who were assigned to a waiting list as controls: 4 mothers and 12 mother-father pairs. Following the wait-period, 13 of these parental units entered treatment groups and 9 completed the training series -- 2 mothers and 7 mother-father pairs.

Thus, counting both initial treatment assignees and wait-controls who then completed treatment, 32 parental units completed treatment in behavior modification training groups. Demographic descriptive data on this sample indicates that 25 of the target youngsters of the parents in training groups were boys, 7 were girls; their ages ranged from 10 to 16, with a median of 12. Only two of these youngsters were only children; the median number of siblings was three. Over three-fourths of the target youngsters were described by the parents as displaying problem behaviors in connection with school as well as at home. Over 90% of both mothers and fathers had completed high school; about half of the mothers and almost two-thirds of the fathers had had some college education, one in eight of the mothers and over one-fourth of the fathers having graduated from college. Family incomes ranged from the $9,000-$12,000 level to (one in 10) over $25,000, with almost half of the sample above $16,000.



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Thus the socio-economic status of the sample is significantly higher than that of the American population at large.

Target behaviors of their youngsters which these parents wanted to change were generally "normal," nondelinquent, nonpsychotic, "management" problems. The most common concern, shared by over half of the parents, was regular completion of assigned chores. Other target behaviors included completing assigned homework/classwork, getting to school on time, complying with parent requests in without backtalk, adhering to curfew rules, going to bed on time, cleaning hands before eating, putting toys and clothes away properly, eliminating bedwetting, decreasing quarreling/fighting with siblings, and increasing cooperative play with peers.

B. EXPERIMENTAL TREATMENTS

1. Study I: Teacher-Mediated Behavior Modification

Yvonne Tellez, employed by the Racine Unified School District under a Federal Title I program, conducted weekly classes in Lindsley's (1967, 1968; Duncan, 1971) simplified "precision teaching" version of behavior modification technology for interested (volunteer) teachers at the selected elementary school mentioned above, together with individual consultation on the teachers' projects with their classes and selected pupils. Since the number of target youngsters with whom behavior modification projects were conducted was too small to permit meaningful data analysis, no further description of these treatment procedures will be presented.

2. Study II: Parent-Mediated Behavior Modification

Carolyn Cole, M.S.W., a social worker with substantial prior training and experience in behavior modification, conducted the training groups for parents in behavior modification technology under general supervision of the project director. The groups, consisting of three to five parental units (mothers and mother-father pairs), had 10 weekly two-hour meetings. Following an introductory overview explanation, the parents were given directions and guidance in specifying carefully the problem behaviors of their youngsters which they wished to modify; in observing, counting, recording, and graphing the daily frequency of those behaviors during baseline and modification phases; and in applying modification procedures emphasizing the arrangement of rewarding consequences for desired behaviors, combined with either ignoring undesired behaviors and withholding rewards, or in some instances combined with mild punishment -- primarily in the form of brief "time-out" isolation procedures. Attention was given both to the use of extrinsic material rewards and privileges contingent on desired behaviors, as well as increased use of contingent praise and approval for desired behaviors. The major focus of the weekly meetings was on application of principles and procedures to the parents' individual aimed at modifying the behavior of their respective youngsters.

Control parents (and their youngsters) were placed on a waiting list with the promise of an opportunity to participate in parent training groups starting about three months later. As far as information available to the project indicated, they received no alternative special treatment during the waiting period.

C. MEASUREMENT PROCEDURES

1. Study I: Teacher-Mediated Behavior Modification

a. Self-Concept Measures. A modified version of Bills' "Index of Adjust-

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ment and Values" (Bills, Vance, & McLena, 1951; Bills, 1961) was used to measure pupils' self-concept, ideal self, and self vs. ideal-self discrepancy. Wylie's (1961) comprehensive critical review had identified Bills' instrument as supported by empirical evidence of reliability and construct validity superior to that available for other self-concept measures. In this procedure the subject was asked to indicate on a questionnaire, for each of 30 personally descriptive adjectives or adjective-phrases, whether "I am like this" "most of the time" or "about half the time" or "hardly ever", and then -- repeating the same list of adjectives and using the same answer categories -- how often "I wish I were like this." Each adjective was briefly defined in parenthesis by short vernacular phrases that were roughly synonymous. Examples: "AFRAID (get scared easily)," "BAD (misbehave, get in trouble," "KIND (nice to other people)," "A HARD WORKER (work hard, study hard)." The questionnaire also asked each student to answer four questions, on 5-point scales, indicating his perception of how much the teacher approved or disapproved of his behavior. (A copy of the questionnaire is appended.)

The self-concept questionnaire was group-administered to each participating teacher's entire class near the beginning of the school year and again during the spring semester after the teacher had completed her behavior modification projects involving students in the class. (In a few instances, individual "make-up" administrations of the questionnaire were arranged for pupils who were absent on the day of the second class administration of the questionnaire.) The questionnaire was administered by an undergraduate research assistant who explained that the data would be used only for purposes of a study and would not be seen by the teacher or by other school personnel. Students were asked to write their names on the questionnaire. The stated purpose of the study was to learn more about how pupils feel about themselves, and (second administration) how these feelings may change or stay the same as pupils have new experiences. As an encouragement to teachers and students to cooperate in the study, each teacher was provided, via administrative channels, a small sum of money to use in purchasing extra classroom supplies not adequately provided for by regular budgets; this fact was made known to the students.

On the basis of pilot work, in order to increase pupil attention to the task, the research assistant used an overhead projector transparency in presenting the questionnaire. The questionnaire form marked by the pupils contained item numbers (and answer columns) without the actual item content. The research assistant presented the items one at a time, pointing to the adjective and its parenthetical definition on the transparency while reading aloud. The students were asked to mark an "X" beside any item whose meaning they were unsure of. Pupils were eliminated from the study who marked "X" beside more than three items, or whose questionnaire revealed an obviously stereotyped response set, or who did not complete both pre and post questionnaires.

Measures obtained from the self-concept questionnaire included: (1) Overall Self-Esteem score, representing the pupil's mean-per-item score on the total set of 30 items, rated as to how often "I am like this," scoring each item on a 3-point scale on an a priori basis as to which direction was personally "desirable" on an evaluative dimension (assuming, for example, that the subjects generally would regard it as desirable to be not "afraid," to be not "bad," to be "kind," to be "a hard worker," etc. (2) Overall Ideal-Self level, representing the pupil's mean-per-item score on the total set of 30 items rated as to how often "I were like this," scored on the same a priori basis as for the overall self-esteem measure. (3) Overall Self vs. Ideal Self Discrepancy, representing the mean-per-item absolute discrepancy (disregarding sign) between item self-scores and corresponding item ideal-self scores. (4) Self-

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Esteem, Ideal-Self, and Self vs. Ideal-Self Subscores for item-subsets classified a priori as referring primarily to a) Academic or school-task behavior (items 2, 5, 7, 11, 12, 16, 24, 25, 26, 27), b) Obedient, Nondisruptive behavior (items 3, 14, 18, 19, 21, 22, 28, 29), and c) Socially Adjusted, Self-Confident (items 1, 4, 9, 10, 13, 15, 19, 20, 23, 30).

b. Teacher Nominations of Deviant vs. Well-Adjusted Pupils. Each teacher was asked (at the time of the first administration of the self-concept questionnaire) to complete a short questionnaire listing names of 3 to 5 pupils in her class who showed, respectively, Lowest Academic Performance, Least Time-on-Task, Most Disruptive behavior, Most Withdrawn or social-isolate behavior, and Most Well-Adjusted Combined with High Academic Performance. These nominations were used to assess the external validity of the self-concept measures by comparing self-concept scores of pupils named as Well-Adjusted High-Academic with scores of pupils named in each of the negative categories, respectively.

2. Study II: Parent-Mediated Behavior Modification

a. Self-Concept Measures were the same as for Study I, except that the questionnaire was individually administered to each subject before and after the parent training group meetings (or, for controls, before and after the waiting period). For subjects who served as wait-controls and then as experimental subjects, the questionnaire was administered three times: before and after the wait period, and again after the ensuing parent training group period. Items were presented orally by the research assistant while the subject had in front of him a copy of the questionnaire that included the content (as well as the number) of each item. The assistant marked the subject's answers on the assistant's copy of the questionnaire.

b. Perceived Parent Behavior. Measures of each subject's perception of his parents' behavior toward him were obtained at the same time as the self-concept measures, in order to evaluate the relationship between changes in these perceptions and changes in self-concept measures. Bronfenbrenner's Parental Behavior Questionnaire (copy appended to this report) used for this purpose, scored on the basis of Siegelman's (1965) factor analysis. This questionnaire consists of 45 statements concerning parental behavior. The child is asked to mark each statement on a 5-point scale as to how true it is of his mother's behavior toward him, and again as to how true it is of his father's behavior toward him. The 5 answer-choices for the first 25 items are: in every case, in most cases, sometimes, seldom, never; for the last 20 items: almost every day, about once a week, about once a month, only once or twice a year, never. Scoring was based on Siegelman's factor analysis results, which yielded three factors: (1) Loving -- mother, items 1, 2, 11, 25, 26, 27, 29, 33, 34, 36, 40, 42; father, items 1, 2, 11, 25, 26, 27, 28, 33, 34, 35, 40, 41. (2) Punishing -- items 3, 4, 12, 13, 19, 20, 30, 31, 37, 38, 43, 44. (3) Demanding -- items 5, 6, 7, 8, 14, 15, 16, 21, 22, 23, 32, 39. Typical items: Loving -- "praises me when I have done something good, " "I can talk with him (her) about everything"; "Is very affectionate with me"; Punishing -- "Punishes me by sending me out of the room," "... by making me do extra work," "... by (etc.)," "Nags at me," "Spanks me"; Demanding -- "Demands that I do better than other children," "Tells me exactly when I should come home," "Worries that I can't take care of myself."

c. Behavior Modification Change. On the basis of examining the behavior records (daily behavior frequency counts, graphs, etc.) of each training-group parent-unit's behavior modification projects with the respective target youngster,



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combined with her meeting notes, the therapist made ratings of the extent of each youngster's behavior change on a 9-point scale ranging from "worsened" (1) to "exceptional improvement" (9 : "two major problem behaviors largely resolved plus clear improvement in one or more other problem behaviors major or minor"), with 4 = "moderate improvement" ("clear improvement in one major problem behavior although considerable problem remains re that behavior &/or clear improvement in 2 or more minor problem behaviors"). Other ratings made by the therapist were: "change in (each) parent's evaluation of child" (from 1 = "more negative" to 6 = "very markedly more positive"); and "change in (each) parent's skill in managing child's behavior" (from 1 = "less skillful" to 6 = "very markedly more skillful"). The therapist also ranked the training-group subjects as to degree of youngster's behavior change.

## III. RESULTS AND DISCUSSION

### A. STUDY 1: Teacher-Mediated Behavior Modification

#### 1. Self-Concept Measures: Reliability and Validity

Since relatively limited data are available on the reliability and validity of self-concept measures, particularly for children, the data reported here are believed to be of some general interest. It is planned to prepare a brief report of this material for journal publication. (If accepted for publication, copies of such a journal article will be submitted as an addendum to the present report.)

Table 1 presents total sample (5 classrooms, N=89) data on the internal-consistency as well as test-retest reliability of the three overall self-concept measures obtained for the total 30-item scale: Self-Esteem ("I am like this --"), Ideal Self ("I wish I were like this --"), and Self vs. Ideal-Self Discrepancy. Spearman-Brown-corrected split-half reliabilities ranged from .77 to .94; test-retest reliabilities (over a period of about 5 months), from .60 to .71. Subscale internal-consistency reliabilities were deemed somewhat inadequate (uncorrected, about .5; corrected, .62 to .68), and subscales were not further analyzed. These reliabilities are considered to be satisfactory for group comparisons, though not for individual predictions.

Table 2 presents mean-per-item subgroup means and standard deviations on the three overall self-concept measures for teacher-nomination subgroups of pupils judged to be "Well-Adjusted, with High-Academic-Performance," "Low Academic Performance," "Low Time-on-Task," highly "Disruptive," and highly "Withdrawn, isolated." Table 2 also reports (2-tail) t-test significance levels for comparisons of the "Well-Adjusted, High Academic" subgroup with each respective deviant subgroup. Tables 3, 4 and 5 present the raw-score frequency distributions of each of these subgroups of the three respective overall self-concept measures. Table 6 summarizes results of Mann-Whitney U test comparisons (considering only the relative ranking of scores in the distributions compared) of the "Well-Adjusted, High-Academic" subgroup with each of the other subgroups, respectively, on each of the three overall self-concept measures. U test results were consistent with t-test results.

The external validity data presented in tables 2 through 6 may be summarized by saying that differences between the well-adjusted, high-academic-performance subgroup and each of the deviant subgroups were statistically significant in all comparisons, with the possible exception of the Ideal Self comparison for the With-



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drawn subgroup, the latter comparison being on the borderline of significance. In most instances the differences were very highly significant. All differences were in the expected direction; that is, the Well-Adjusted, High-Academic-Performance subgroup obtained scores indicating higher Self-Esteem, higher Ideal Self aspirations, and less Self vs. Ideal-Self Discrepancy. These results offer support for the validity of each of the self-concept Discrepancy measures employed as an indicator of "positive adjustment" versus "lack of adjustment" or "deviance" in relation to dominant social norms.

These statements need to be qualified by noting (tables 3-5) that in each comparison there is substantial overlap between individual subjects in the two distributions being compared. At the same time, non-overlap applies with respect to approximately the top third of the Well-Adjusted, High-Academic-Performance subgroup on Self-Esteem and Discrepancy measures, though not on Ideal Self measure, and -- except for the Withdrawn subgroup -- to the bottom-third-to-more-than-half of the several deviant subgroups.

A final qualification is that the various validity comparisons are not independent of each other. The Well-Adjusted, High-Academic subgroup is repeatedly compared with the same respective deviant subgroups. Moreover, the several deviant subgroups overlap substantially with each other; i.e., some of the pupils named in one subgroup are also named in one or more other subgroups.

Despite these qualification, the degree of relationship between the self-concept measures and an entirely independent type of measure, teacher nominations based (presumably primarily) on observation of the subjects' behavior and performance in the classroom, is quite substantial.

2. Self-Concept Changes Associated with Behavior Modification. As noted earlier, the number of teachers and therefore the number of experimental subjects available for study was too small to permit meaningful statistical analysis.

B. STUDY II: Parent-Mediated Behavior Modification.

1. Self-Concept Changes Associated with Behavior Modification. The results here can be summarized very briefly: no significant relationships. There were no significant differences in amount of change shown on self-concept measures by experimental subjects rated as having shown "moderate" or greater behavior modification changes, as compared with control subjects. Similarly, control subjects who, following a wait period, then became experimental subjects, did not show greater change in self-concept measures during the experimental period than during the control period. Nor were significant relationships found within the experimental group between ratings of extent of behavior modification changes on the one hand and amount of change in self-concept measures on the other hand. Further analyses of relationships between behavior changes and other variables were not carried out.

We can only speculate on possible reasons for the lack of significant relationships between behavior changes and self-concept changes. In view of the evidence summarized above regarding the reliability and validity of the self-concept measures, it seems unlikely that the lack of significant relationships was due to unreliability or invalidity of the self-concept measures. One plausible reason may be that the environmental and behavior changes brought about by the parent training program in the present project were not sufficiently potent and salient to the experimental



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subjects to produce significant generalized positive changes in their self-esteem, ideal-self aspirations, or self-ideal self discrepancies. By contrast, the two studies cited earlier which did produce (barely) significant generalized self-concept changes accompanying induced behavior changes involved behavioral achievement of (vs. failure to achieve) a difficult skill (swimming) that was probably highly salient for the subjects (preadolescent boys) (Koocher (1971)), or a highly encompassing, totalistic, positive environmental modification program for subjects who had been publicly stigmatized as "problems" (Sopina, 1970). In the present study, on the other hand, subjects were not highly deviant and behavior modification efforts were generally aimed at particular behaviors that bothered the parents but may often not have been important for the subjects' general self-concept reactions.

2. Observations regarding Refractory Parent Behaviors in Behavior Modification Training Groups. The project's behavior modification parent-training groups seemed to be generally fairly successful in terms of reported parent success in altering target behaviors of their youngsters and in terms of the parents' general satisfaction. However, some parents largely failed to implement the step-by-step procedures presented to them in group meetings, and often seemed to "resist" the ideas presented. In discussing these "failures," the project director and the therapist noted certain recurrent patterns of behavior on the part of these parents, and formulated hypotheses as to how these parents' refractory behavior might be overcome so as to help them successfully implement behavior modification procedures to achieve their stated goals for altering their youngsters' behavior. Since there is a dearth of published discussions of problems encountered in conducting behavior-modification parent-training groups, these discussions led to the preparation of an article, "Refractory Parent Behaviors in Behavior Modification Training Groups." This article has been accepted for publication in the journal, Psychotherapy, subject to suggested revisions. (Copies of this article will be transmitted to be appended to the present report when the final version of the paper has been completed.)

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Table 1

Self-Concept Reliabilities (30-Items):
Inner-City Upper-Elementary Pupils (N=89)

| Scale | Odd-Even | | | Test-Retest | |
|---|---|---|---|---|---|
| | $r_{oe}$ | p | $r_{11}$ | $r_{12}$ | p |
| Self-Esteem | | | | | |
| Total (30 Items) | .71 | .01 | .83 | .71 | .01 |
| Ideal Self | | | | | |
| Total (30 Items) | .89 | .01 | .94 | .60 | .01 |
| Self-Ideal Self Discrepancy | | | | | |
| Total (30 Items) | .62 | .01 | .77 | .68 | .01 |

Table 2

Self-Concept Means and Standard Deviations of Teacher-Nominated "Well-Adjusted, High Academic versus Deviant Inner-City Upper-Elementary Pupils

| Pupil Category | N | Self-Concept | | Ideal Self | | Discrepancy | |
|---|---|---|---|---|---|---|---|
| | | Mean* | S.D.* | Mean* | S.D.* | Mean* | S.D.* |
| Well-Adjusted, High-Academic | 16 | 2.72 | .24 | 2.88 | .15 | .31 | .21 |
| Low Academic | 17 | 2.22[d] | .24 | 2.37[d] | .37 | .76[d] | .18 |
| Low Time-On-Task | 19 | 2.30[d] | .25 | 2.49[d] | .40 | .73[d] | .20 |
| Disruptive | 21 | 2.31[d] | .27 | 2.47[d] | .43 | .69[d] | .26 |
| Withdrawn | 9 | 2.45[b] | .30 | 2.59* | .41 | .58[d] | .21 |

*Group means and standard deviation are given in terms of mean-per-item scores.

[a,b,c,d]t-test comparison with "Well-Adjusted, High-Academic category yielded p-value (2-tail test) significant at (a) .10, (b) .05, (c) .01, or (d) .001 level, respectively.

Table 3

Self-Esteem Raw-Scores of Teacher-Nominated "Well-Adjusted, High-Academic" versus Deviant Inner-City Upper-Elementary Pupils

| Mean Per-Item Score | Well-Adjusted High-Academic N=16 | Low Academic N=17 | Low-Time on-Task N=17 | Disruptive N=21 | With-Drawn N=9 |
|---|---|---|---|---|---|
| 3.00 | II | | | | |
| 2.97 | I | | | | |
| 2.93 | II | | | | |
| 2.90 | | | | | |
| 2.87 | I | | | | |
| 2.83 | | | | I | I |
| 2.80 | | | | | I |
| 2.77 | II | | I | I | |
| 2.73 | I | | I | | |
| 2.70 | I | | | I | |
| 2.67 | I | | | | I |
| 2.63 | | I | | | |
| 2.60 | | | | I | |
| 2.57 | II | | I | | |
| 2.53 | I | II | I | | I |
| 2.50 | | | II | II | |
| 2.47 | | I | I | I | I |
| 2.43 | | II | I | I | |
| 2.40 | | I | | I | |
| 2.37 | | | | | II |
| 2.33 | | | | | |
| 2.30 | I | | | I | |
| 2.27 | | | | | |
| 2.23 | | | II | I | |
| 2.20 | I | | I | | |
| 2.17 | | | | | |
| 2.13 | | | II | I | |
| 2.10 | | II | II | IIII | |
| 2.07 | | II | | II | I |
| 2.03 | | II | II | II | |
| 2.00 | | III | I | I | |
| 1.97 | | I | I | | I |
| 1.93 | | | | | |
| 1.90 | | | | | |

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Table 4

Ideal-Self Raw Scores of Teacher-Nominated "Well-Adjusted, High-Academic" versus Deviant Inner-City Upper-Elementary Pupils

| Mean Per-Item Score | Well-Adjusted High-Academic N=16 | Low Academic N=16 | Low-Time on-Task N=18 | Disruptive N=20 | With-Drawn N=11 |
|---|---|---|---|---|---|
| 3.00 | IIIIII | I | II | I | I |
| 2.97 | I | | I | III | |
| 2.93 | II | | I | | I |
| 2.90 | I | | | I | II |
| 2.87 | | | I | I | |
| 2.83 | I | | | II | I |
| 2.80 | I | I | | | |
| 2.77 | II | I | | | |
| 2.73 | | I | II | | I |
| 2.70 | | I | | | |
| 2.67 | | | I | | |
| 2.63 | | | | | II |
| 2.60 | I | I | I | II | |
| 2.57 | | | I | | |
| 2.53 | | | | | |
| 2.50 | I | | | | |
| 2.47 | | I | | | |
| 2.43 | | | | | |
| 2.40 | | I | | | |
| 2.37 | | | | | |
| 2.33 | | | I | I | |
| 2.30 | | II | II | II | |
| 2.27 | | | | | |
| 2.23 | | | | | |
| 2.20 | | | | | |
| 2.17 | | | | | |
| 2.13 | | I | I | II | |
| 2.10 | | | | | |
| 2.07 | | I | I | | I |
| 2.03 | | | | | |
| 2.00 | | | | I | |
| 1.97 | | II | I | I | I |
| 1.93 | | | | | |
| 1.90 | | I | I | II | I |
| 1.87 | | | | | |
| 1.83 | | | | | |
| 1.80 | | I | I | I | |

Table 5

Self-Ideal Self Discrepancy Raw Scores of Teacher-Nominated "Well-Adjusted, High Academic" versus Deviant Inner-City Upper-Elementary Pupils

| Mean Per-Item Score | Well-Adjusted High-Academic N=16 | Low Academic N=16 | Low-Time on-Task N=17 | Disruptive N=18 | With-Drawn N=9 |
|---|---|---|---|---|---|
| 0.00 | I | | | | |
| .03 | I | | | | |
| .07 | I | | | | |
| .10 | | | | | |
| .13 | I | | | | |
| .17 | I | | | | |
| .20 | | | | I | |
| .23 | I | | | | |
| 2.7 | III | | | I | I |
| .30 | | | | | |
| .33 | I | | I | | |
| .37 | | | | | |
| .40 | II | | | | I |
| .43 | I | | I | II | |
| .47 | | I | | | I |
| .50 | | | II | II | |
| .53 | | I | | | II |
| .57 | I | | | | |
| .60 | I | I | | | I |
| .63 | | II | | I | |
| .67 | | II | II | | |
| .70 | | | I | | I |
| .73 | I | II | III | IIII | |
| .77 | | I | I | I | I |
| .80 | | I | I | I | |
| .83 | | | | | |
| .87 | | I | I | I | |
| .90 | | | | | |
| .93 | | | II | | |
| .97 | | 'I | I | I | I |
| 1.00 | | | | I | |
| 1.03 | | I | | | |
| 1.07 | | I | I | II | |
| 1.10 | | | | | |

Table 6

Self-Concept Comparisons, by Mann-Whitney U Test, of "Well-Adjusted, High-Academic-Performance Subgroup (N=16) of Inner-City Upper-Elementary Pupils with Specified Deviant Subgroups Nominated by Teachers

| Pupil Subgroup | N | Self-Esteem | | Ideal Self | | Self-Ideal Self Discrepancy | |
|---|---|---|---|---|---|---|---|
| | | U | p* | U | p* | U | p* |
| Low Academic | 17 | 18 | .002 | 26 | .002 | 12.5 | .002 |
| Low Time-on-Task | 19 | 33.5 | .002 | 58 | .02 | 20.5 | .002 |
| Disruptive | 21 | 43 | .001 | 68 | .02 | 35.5 | .002 |
| Withdrawn | 9 | 34 | .05 | 45.5 | .05 | 25 | .02 |

*2-tail test



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